

## ABSTRACT

As multicast services become prevalent, it is important to find viable solutions for multicasting to mobile nodes. This problem is complicated by the necessity to support multicast services over existing backbone and access networks that may have varying network and/or link layer multicasting capabilities. While most work on supporting multicast services focuses on the IP layer solution, the present invention presents an application-layer approach for providing multicast services to mobile users traversing networks with diverse multicast capabilities. The present invention places multicast proxies in the backbone and access networks to support several multicast-related functions at the application layer including the creation of virtual networks for dynamically tunneling through non-multicast-capable networks.